Index of Authors

Aboul-Ela, M. B., *see* Aboul-Naga, A. M.

Aboul-Naga, A. M., Aboul-Ela, M. B. and Hassan, F. A. Comparative study of oestrous activity in Finn ewes and two Egyptian fat-tailed sheep under subtropical conditions, 469

Addo-Quaye, A. A., Daniels, R. W. and Scarisbrick, D. H. Influence of paclobutrazol on the distribution and utilization of ^{14}C-labelled assimilate fixed at anthesis in oil-seed rape (*Brassica napus* L.), 365

Addo-Quaye, A. A., *see also* Scarisbrick, D. H.

Ahlawat, I. P. S., Singh, A. and Sharma, R. P. Water and nitrogen management in wheat–lentil intercropping system under late-sown conditions, 697

Allcock, P. J., *see* Smith, A.

Allen, E. J., *see* Wilcockson, S. J.

Amir, D. and Gacitua, H. Effect of artificial light, hormones, and rams on the reproductive performance of Finn-cross ewes during the seasonal anoestrus in Israel, 375

Antoniou, T. and Hadjipanayiotou, M. Digestibility by sheep and goats of five roughages offered alone or with concentrates, 663

Austin, R. B., *see* Hanson, P. R.

Banks, N. H. Coating and modified atmosphere effects on potato tuber greening, 59

Barrie, I. A., *see* Thompson, N.

Bell, N., *see* Benjamin, L. R.

Benjamin, L. R. and Bell, N. Influence of seed type and plant density on variation in plant size of red beet (*Beta vulgaris* L.) crops, 563

Benjamin, R. W., *see* Seligman, N. G.

Berg, R. T., *see* Shahin, K. A.

Beri, N., *see* Garg, F. C.

Bhattacharya, N. C., *see* Bhattacharya, S.

Bhattacharya, S., Bhattacharya, N. C., Biswas, P. K. and Strain, B. R. Response of cow pea (*Vigna unguiculata* L.) to CO_2 enrichment environment on growth, dry-matter production and yield components at different stages of vegetative and reproductive growth, 527

Bidinger, F. R., *see* Mahalakshmi, V.

Biscoe, P. V., *see* Brown, K. F.

Biswas, C. R., *see* Ganeshamurthy, A. N.

Biswas, P. K., *see* Bhattacharya, S.

Blackwell, R. D., *see* Innes, P.

Blanchflower, W. J., *see* Rice, D. A.

Braithwaite, G. D. Endogenous faecal loss of phosphorus in growing lambs and the calculation of phosphorus requirements, 67

Breves, G., Ross, R. and Höller, H. Dietary phosphorus depletion in sheep: effects on plasma inorganic phosphorus, calcium, 1,25-$(OH)_2$-Vit.D_3 and alkaline phosphatase and on gastrointestinal P and Ca balances, 623

Brock, T. B., *see* Wheeler, S. M.

Brown, D. S., *see* Robinson, J. J.

Brown, K. F. and Biscoe, P. V. Fibrous root growth and water use of sugar beet, 679

Bruce, L. A., *see* Scott, D.

Buchan, W., *see* Scott, D.

Bufton, L. P., *see* Wurr, D. C. E.

Buwalda, J. G., Stribley, D. P. and Tinker, P. B. Effects of vesicular–arbuscular mycorrhizal infection in first, second and third cereal crops, 631

Buwalda, J. G., Stribley, D. P. and Tinker, P. B. Vesicular–arbuscular mycorrhizae of winter and spring cereals, 649

Caligari, P. D. S., *see* Powell, W.

Chari, M., *see* Prasad, T. G.

Coleman, G. S. Possible causes of the high death rate of ciliate protozoa in the rumen, 39

Cousens, R. Empirical model relating crop yield to weed and crop density and a statistical comparison with other models, 513

Crews, H. M. and Davies, B. E. Heavy metal uptake from contaminated soils by six varieties of lettuce (*Lactuca sativa* L.), 591

Daniels, R. W., *see* Addo-Quaye, A. A., Scarisbrick, D. H.

Darby, R. J., *see* Widdowson, F. V.

Davies, B. E., *see* Crews, H. M.

Dawkins, T. C. K., *see* Green, C. F.

De, R., Salim Khan, M. A., Katti, M. S. and Raja, V. Fodder legumes affecting sequential crop production and fertilizer N use efficiency, 1

De, R., *see also* Singh, R. K.

Deltoro, J. and Lopez, A. M. Allometric changes during growth in rabbits, 339

De, Maine, M. J. Effects of changes in fertilizer application on glasshouse-grown plants of dihaploid potatoes, their chromosome-doubled derivatives and tetraploid parents, 251

Devendra, R., *see* Prasad, T. G.

Dingwall, R. A., *see* Field, A. C.

Döbeli, M., *see* Henderson, R.

Durkin, J., *see* Trail, J. C. M.

Ehoche, O. W., *see* Ikhatua, U. J.

El Attal, Z. M., *see* Moustafa, O. K.

Elliott, R., Norton, B. W. and Ford, C. W. *In vivo* colonization of grass cell walls by rumen microorganisms, 279

Farid, M. F. A., *see* Hossamo, H. E.

Feigenbaum, S., *see* Seligman, N. G.

Feinerman, D., *see* Seligman, N. G.

Fellows, J. R., *see* Wurr, D. C. E.

Ferguson, A. W., *see* Free, J. B.

Field, A. C., Woolliams, J. A. and Dingwall, R. A. Effect of dietary intake of calcium and dry matter on the absorption and excretion of calcium and phosphorus by growing lambs, 237

Fischer, R. A. Number of kernels in wheat crops and the influence of solar radiation and temperature, 447

Ford, C. W., *see* Elliott, R.

FRASER, C., *see* ROBINSON, J. J.
FREE, J. B., PICKETT, J. A., FERGUSON, A. W., SIMPKINS, J. R. and SMITH, M. C. Repelling foraging honeybees with alarm pheromones, 255

GACITUA, H., *see* AMIR, D.
GANESHAMURTHY, A. N., BISWAS, C. R. and SINGH, B. Forms of potassium in the profiles of two long-term experiments in relation to K nutrition of crops, 209
GARG, F. C., BEBI, N. and TAUBO, P. Intrinsic antibiotic resistance in chickpea (*Cicer arietinum*) rhizobia, 85
GERSON, T., JOHN, A. and KING, A. S. D. Effects of dietary starch and fibre on the *in vitro* rates of lipolysis and hydrogenation by sheep rumen digesta, 27
GHOSH, S. K. Virus infection: a host dependent reaction reversible phenomenon, 141
GIRI, G. and SARAN, G. Effect of preceding season cultural practices on mustard (*Brassica juncea* Czern) under semi-arid rainfed conditions of north-west India, 91
GREEN, C. F., DAWKINS, T. C. K. and HUNTER, B. Influence of foliar applied chlormequat on radiation attenuation by winter barley canopies, 213
GREEN, C. F. and MCDONALD, H. G. Suppression of lodging in triticale following foliar application of growth regulators, 731
GREEN, C. F., PAULSON, G. A. and IVINS, J. D. Time of sowing and the development of winter wheat, 217
GUTTERIDGE, R. J., *see* WIDDOWSON, F. V.

HADJIPANAYIOTOU, M., *see* ANTONIOU, T.
HANSON, P. R., RIGGS, T. J., KLOSE, S. J. and AUSTIN, R. B. High biomass genotypes in spring barley, 73
HARVEY, L. D. J., *see* THOMPSON, N.
HASSAN, F. A., *see* ABOUL-NAGA, A. M.
HAY, R. K. M. Seasonal distribution of dry-matter production in grass varieties from different latitudes in northern Europe, 187
HENDERSON, R., STOLBA, A., DÖBELI, M. and KÜNDIG, H. Attempts to develop a simple, objective test for oestrus in sows, 129
HENDRICKSEN, R. E., *see* POPPI, D. P.
HEWITT, M. V., *see* WIDDOWSON, F. V.
HÖLLER, H., *see* BREVES, G.
HOOGENDOORN, J., *see* INNES, P.
HOPKINS, D. L. and TULLOH, N. M. Effects of a severe nutritional check in early post-natal life on the subsequent growth of sheep to the age of 12–14 months. Changes in body weight, wool and skeletal growth, and effects at the cellular level, 551
HOSSAMO, H. E., OWEN, J. B. and FARID, M. F. A. Genetic improvement of Syrian Awassi sheep with special reference to milk production, 327
HUNTER, B., *see* GREEN, C. F.
HUNTER, E. A., *see* WALE, S. J.

IKHATUA, U. J., EHOCHE, O. W. and UMOH, J. E. Effects of restricted water on feed intake, nutrient utilization and nitrogen metabolism in Zebu cattle, 463
ILLIUS, A. W. Predictive model of seasonal changes in herbage digestibility, 505
INNES, P., HOOGENDOORN, J. and BLACKWELL, R. D. Effects of differences in date of ear emergence and height on yield of winter wheat, 543
IVINS, J. D., *see* GREEN, C. F.

JACKSON, C., *see* NEWTON, J. E.
JEFFERIES, R. A. and MACKERRON, D. K. L. Stemflow in potato crops, 205
JESSOP, R. S. and MAHONEY, J. Effect of soil nitrogen on grain legume yield and nitrogen fixation, 231
JIBBO, J. M. C., *see* TRAIL, J. C. M.
JINKS, J. L., *see* POWELL, W.
JOHN, A., *see* GERSON, T.
JOHNSTON, A. E., *see* LEIGH, R. A.
JORDAN, D. J., *see* KEMP, P.

KATTI, M. S., *see* DE, R.
KAYODE, G. O. Responses of yield, components of yield and nutrient content of maize to soil-applied zinc in tropical rainforest and savannah regions, 135
KEMP, P., JORDAN, D. J. and ORPIN, C. G. Free- and protein-amino acids of the rumen phycomycete fungi *Neocallimastix frontalis* and *Piromonas communis*, 523
KERSHAW, C. D. and MCRAE, D. C. Sequential design for estimating levels with low response rates in potato drop tests and other binary response experiments, 51
KING, A. S. D., *see* GERSON, T.
KLOSE, S. J., *see* HANSON, P. R.
KÜNDIG, H., *see* HENDERSON, R.

LAL, R. B., *see* SINGH, R. K.
LAWRENCE, P. R. and PEARSON, R. A. Factors affecting the measurements of draught force, work output and power of oxen, 703
LAWSON, D. M., *see* MCLAREN, R. G.
LEIGH, R. A. and JOHNSTON, A. E. Nitrogen concentrations in field-grown spring barley: an examination of the usefulness of expressing concentrations on the basis of tissue water, 397
LIGHT, D., *see* TRAIL, J. C. M.
LOPEZ, A. M., *see* DELTORO, J.

MCDONALD, H. G., *see* GREEN, C. F.
MCDONALD, I., *see* ROBINSON, J. J.
MCLAREN, R. G., LAWSON, D. M., SWIFT, R. S. and PURVES, D. Effects of cobalt additions on soil and herbage cobalt concentrations in some S.E. Scotland pastures, 347
MACKERRON, D. K. L., *see* JEFFERIES, R. A.
MCMURRAY, C. H., *see* RICE, D. A.
MCRAE, D. C., *see* KERSHAW, C. D.
MAHALAKSHMI, V. and BIDINGER, F. R. Water stress and time of floral initiation in pearl millet, 437
MAHAMUD, S., *see* SCARISBRICK, D. H.
MAHONEY, J., *see* JESSOP, R. S.
MANTLE, P. G. and WILLINGALE, J. Effect of alkaloid-free ergot on the growth of obese and lean mice, 407
MESBAH, H. A. Evaluation of the potency of the biological compound Dipel against the spiny bollworm *Earias insulana* (Boisd.), 587
MILLARD, P., SHARP, G. S. and SCOTT, N. M. Effect of sulphur deficiency on the uptake and incorporation of nitrogen in ryegrass, 501
MINSON, D. J., *see* POPPI, D. P.

Moustafa, O. K. and El Attal, Z. M. Enhancement of the efficiency of some insecticides against thrips and cotton leafworm by mineral oils, 63
Muldoon, D. K. Growth, mineral composition and grain yield of irrigated and rainfed millets and sorghum, 31
Müller-Wilmes, U., *see* Ridgman, W. J.
Murray, M., *see* Trail, J. C. M.

Newton, J. E. and Jackson, C. Effects of management and duration of grazing by sheep during the autumn and winter on subsequent grass production, 199
Norton, B. W., *see* Elliott, R.

Oddy, V. H. Wool growth of pregnant and lactating Merino ewes, 613
Oladiran, A. O. and Oso, B. A. Interactions between fungicides, insecticides and spraying regimes in the control of fungal diseases, insect pests and yield of cow pea *Vigna unguiculata* (L.) Walp., 45
Orpin, C. G., *see* Kemp, P.
Oso, B. A., *see* Oladiran, A. O.
Owen, J. B., *see* Hossamo, H. E.

Parkinson, R. J. and Yells, R. Copper content of soil and herbage following pig slurry application to grassland, 183
Paroda, R. S., *see* Singh, I.
Parsons, D. G., *see* Smith, D. B.
Paulson, G. A., *see* Green, C. F.
Pearson, R. A., *see* Lawrence, P. R.
Penny, A., *see* Widdowson, F. V.
Perez de la Vega, M., *see* Ramirez, L.
Phelps, K., *see* Walkey, D. G. A.
Pickett, J. A., *see* Free, J. B.
Pisabarro, G., *see* Ramirez, L.
Pitt, R. E. Evaporation-based drying rate of forage: effects of desiccants and crop density, 223
Poppi, D. P., Hendricksen, R. E. and Minson, D. J. Relative resistance to escape of leaf and stem particles from the rumen of cattle and sheep, 9
Powell, W., Caligari, P. D. S. and Jinks, J. L. Usefulness and limitations of estimating the number of genes in a barley breeding programme, 285
Prasad, R. and Singh, S. Relative efficiency of urea and urea supergranules for irrigated wheat, 693
Prasad, T. G., Sashidhar, V. R., Chari, M., Rama Rao, S., Devendra, R. and Udaya Kumar, M. Regulation of water loss under moisture stress in sunflower genotypes: stomatal sensitivity in relation to stomatal frequency, diffusive resistances and transpiration rate, at different canopy positions, 673
Purves, D., *see* McLaren, R. G.

Rai, R. Studies on nitrogen fixation by antibiotic-resistant mutants of *Azospirillum brasilense* and their interaction with cheena (*Panicum miliaceum* L.) genotypes in calcareous soil, 261
Raja, V., *see* De, R.
Rama Rao, S., *see* Prasad, T. G.
Ramirez, L., Pisabarro, G. and Perez de la Vega, M. Isozyme genetic similarity among rye (*Secale cereale* L.) cultivars, 495
Reid, D. Comparison of the yield responses of four grasses to a wide range of nitrogen application rates, 381
Rice, D. A., Blanchflower, W. J. and McMurray, C. H., Effects of moisture, propionic acid, sodium hydroxide and anaerobiasis on the stability of vitamin E in stored barley, 15
Ridgman, W. J., Walters, D. E., Wedgwood, R. B. and Müller-Wilmes, U. Some effects of rate of application of nitrogenous fertilizer to wheat grown continuously compared with wheat in a four-course rotation, 389
Riggs, T. J., *see* Hanson, P. R.
Robinson, J. J., McDonald, I., Brown, D. S. and Fraser, C. Studies on reproduction in prolific ewes. 8. The concentrations and rates of accretion of amino acids in the foetuses, 21
Ross, R., *see* Breves, G.

Sachs, M. H. and Zilkah, S. Characterization of climatic factors affecting chilling injury in field-grown ratoon cotton, 475
Salim Khan, M. A., *see* De, R.
Saran, G., *see* Giri, G.
Sashidhar, V. R., *see* Prasad, T. G.
Scarisbrick, D. H., Addo-Quaye, A. A., Daniels, R. W. and Mahamud, S. Effect of paclobutrazol on plant height and seed yield of oil-seed rape (*Brassica napus* L.), 605
Scarisbrick, D. H., *see also* Addo-Quaye, A. A.
Scott, D., Whitelaw, F. G., Buchan, W. and Bruce, L. A. Effect of variation in phosphorus intake on salivary phosphorus secretion, net intestinal phosphorus absorption and faecal endogenous excretion in sheep, 271
Scott, N. M., *see* Millard, P.
Scott, R. K., *see* Wilcockson, S. J.
Sekhon, H. S. and Singh, M. Optimizing seed rate and stem density for seed potato production, 189
Seligman, N. G., Feigenbaum, S., Benjamin, R. W. and Feinerman, D. Efficiency of fallow as a store for fertilizer nitrogen in a semi-arid region, 245
Shahin, K. A. and Berg, R. T. Growth and distribution of individual muscles in Double Muscled and normal cattle, 479
Sharma, R. P., *see* Ahlawat, I. P. S.
Sharp, G. S., *see* Millard, P.
Shrestha, S. K., *see* Wilman, D.
Simpkins, J. R., *see* Free, J. B.
Singh, A., *see* Ahlawat, I. P. S.
Singh, B., *see* Ganeshamurthy, A. N.
Singh, B. N., *see* Singh, B. P.
Singh, B. P., Singh, R. A., Sinha, M. K. and Singh, B. N. Evaluation of technique for screening Fe-efficient genotypes of rice in calcareous soil, 193
Singh, I., Paroda, R. S. and Singh, S. Estimation of additive and dominance components through triple test cross in wheat, 123
Singh, M., *see* Sekhon, H. S.
Singh, R. A., *see* Singh, B. P.
Singh, R. K., De, R. and Lal, R. B. Contribution of legumes to the fertilizer nitrogen economy in a maize-based cropping system, 491
Singh, S., *see* Prasad, R., Singh, I.

SINHA, M. K., *see* SINGH, B. P.
SMITH, A. and ALLCOCK, P. J. Influence of age and year of growth on the botanical composition and productivity of swards, 299
SMITH, D. B., PARSONS, D. G. and STARR, C. Simple and rapid method of quantitatively measuring the glucosinolate concentration of rapeseed, 597
SMITH, M. C., *see* FREE, J. B.
SONES, K., *see* TRAIL, J. C. M.
STARR, C., *see* SMITH, D. B.
STEVENS, R. J. Evaluation of the sulphur status of some grasses for silage in Northern Ireland, 581
STOLBA, A., *see* HENDERSON, R.
STRAIN, B. R., *see* BHATTACHARYA, S.
STRIBLEY, D. P., *see* BUWALDA, J. G.
SWIFT, R. S., *see* MCLAREN, R. G.

TAURO, P., *see* GARG, F. C.
TEASDALE, D., *see* WHEELER, S. M.
THOMPSON, N., BARRIE, I. A. and HARVEY, L. D. J. Climatic potential for field hay drying in north-west Europe, 167
TINKER, P. B., *see* BUWALDA, J. G.
TRAIL, J. C. M., MURRAY, M., SONES, K., JIBBO, J. M. C., DURKIN, J. and LIGHT, D. Boran cattle maintained by chemoprophylaxis under trypanosomiasis risk, 147
TULLOH, N. M., *see* HOPKINS, D. L.

UDAYA KUMAR, M., *see* PRASAD, T. G.
UMOH, J. E., *see* IKHATUA, U. J.

WALE, S. J. and HUNTER, E. A. Comparison of fungicides for the control of mildew on spring barley, 573
WALKEY, D. G. A., WARD, C. M. and PHELPS, K. Reaction of lettuce (*Lactuca sativa* L.) cultivars to cucumber mosaic virus, 291
WALTERS, D. E., *see* RIDGMAN, W. J.
WARD, C. M., *see* WALKEY, D. G. A.
WEDGWOOD, R. B., *see* RIDGMAN, W. J.
WHEELER, S. M., BROCK, T. B. and TEASDALE, D. Effects of added 30 mg fluoride/l drinking water given to pregnant ewes and their lambs upon physiology and wool growth, 715
WHITELAW, F. G., *see* SCOTT, D.
WIDDOWSON, F. V., PENNY, A., GUTTERIDGE, R. J., DARBY, R. J. and HEWITT, M. V. Tests and amounts and times of application of nitrogen and of sequential sprays of aphicide and fungicides on winter wheat, following either beans or wheat, and the effects of take-all (*Gaeumannomyces graminis* var. *tritici*), on two varieties at Saxmundham, Suffolk 1980–3, 97
WILCOCKSON, S. J., ALLEN, E. J., SCOTT, R. K. and WURR, D. C. E. Effects of crop husbandry and growing conditions on storage losses of Pentland Crown potatoes, 413
WILLINGALE, J., *see* MANTLE, P. G.
WILMAN, D. and SHRESTHA, S. K. Some effects of canopy height on perennial ryegrass and white clover in a field sward, 79
WOOLLIAMS, J. A., *see* FIELD, A. C.
WURR, D. C. E. and FELLOWS, J. R. Effect of amount and timing of nitrogen application to drilled crisp lettuce crops on head weight at maturity, 727
WURR, D. C. E., FELLOWS, J. R. and BUFTON, L. P. Effects of seed covering treatments on the emergence and seedling growth of crisp lettuce drilled with an experimental dibber drill, 535
WURR, D. C. E., *see also* WILCOCKSON, S. J.

YASSIN, T. E. Inheritance of resistance to leaf curl virus disease in a cross between tomato (*Lycopersicon esculentum* Mill.) and currant tomato (*L. pimpinellifolium* (Jusl.) Mill.), 659
YELLS, R., *see* PARKINSON, R. J.

ZILKAH, S., *see* SACHS, M. H.

Index of Subjects

Age and year of growth on the botanical composition and productivity of swards, influence of (Smith and Allcock), 299

Alkaloid-free ergot on the growth of obese and lean mice, effect of (Mantle and Willingale), 407

Allometric changes during growth in rabbits (Deltoro and Lopez), 339

Amino acids of the rumen phycomycete fungi *Neocallimastix frontalis* and *Piromonas communis*, free- and protein- (Kemp *et al.*), 523

Antibiotic resistance in chickpea rhizobia, intrinsic (Garg *et al.*), 85

resistant mutants of *Azospirillum brasilense* and their interaction with cheena genotypes in calcareous soil, nitrogen fixation by (Rai), 261

Aphicide, tests of amounts and times of application of sequential sprays of, on winter wheat, following either beans or wheat, and the effects of take-all on two varieties at Saxmundham, Suffolk 1980–3 (Widdowson *et al.*), 97

Assimilate fixed at anthesis in oil-seed rape, influence of paclobutrazol on the distribution and utilization of ^{14}C-labelled (Addo-Quaye *et al.*), 365

Atmosphere effects on potato tuber greening, coating and modified (Banks), 59

Azospirillum brasilense and their interaction with cheena genotypes in calcareous soil, antibiotic-resistant mutants of (Rai), 261

Barley breeding programme, usefulness and limitations of estimating the number of genes in a (Powell *et al.*), 285

canopies, influence of foliar applied chlormequat on radiation attenuation by winter (Green *et al.*), 213

effects of moisture, propionic acid, sodium hydroxide and anaerobiasis on the stability of vitamin E in stored (Rice *et al.*), 15

spring, comparison of fungicides for the control of mildew on (Wale and Hunter), 573

spring, high biomass genotypes in (Hanson *et al.*), 73

spring, nitrogen concentrations in field-grown (Leigh and Johnston), 397

Beet, red, influence of seed type and plant density on variation in plant size of (Benjamin and Bell), 563

sugar, fibrous root growth and water use of (Brown and Biscoe), 679

Beta vulgaris, *see* Beet, red

Binary response experiments, sequential design for estimating levels with low response rates in potato drop tests and other (Kershaw and McRae), 51

Biomass genotypes in spring barley, high (Hanson *et al.*), 73

Bollworm, spiny, evaluation of the potency of the biological compound Dipel against the (Mesbah), 587

Botanical composition and productivity of swards, influence of age and year of growth on the (Smith and Allcock), 299

Brassica juncea, *see* Mustard

Brassica napus, *see* Rape, oil-seed

Breeding programme, usefulness and limitations of estimating the number of genes in a barley (Powell *et al.*), 285

Calcium and dry matter on the absorption and excretion of calcium and phosphorus by growing lambs, effect of dietary intake of (Field *et al.*), 237

balances, dietary phosphorus depletion in sheep: effects on plasma inorganic phosphorus, calcium, 1,25-$(OH)_2$-Vit.D_3 and alkaline phosphatase and on gastrointestinal P and (Breves *et al.*), 623

Canopy height on perennial ryegrass and white clover in a field sward, some effects of (Wilman and Shrestha), 79

Carbon dioxide enrichment environment on growth, dry-matter production and yield components at different stages of vegetative and reproductive growth, response of cow pea to (Bhattacharya *et al.*), 527

Cattle and sheep, relative resistance to escape of leaf and stem particles from the rumen of (Poppi *et al.*), 9

growth and distribution of individual muscles in Double Muscled and normal (Shahin and Berg), 479

maintained by chemoprophylaxis under trypanosomiasis risk, Boran (Trail *et al.*), 147

Zebu, effects of restricted water on feed intake, nutrient utilization and nitrogen metabolism in (Ikhatua *et al.*), 463

Cereals, effects of vesicular-arbuscular mycorrhizal infection in first, second and third (Buwalda *et al.*), 631

vesicular–arbuscular mycorrhizae of winter and spring (Buwalda *et al.*), 649

Cheena genotypes in calcareous soil, antibiotic-resistant mutants of *Azospirillum brasilense* and their interaction with (Rai), 261

Chemoprophylaxis under trypanosomiasis risk, Boran cattle maintained by (Trail *et al.*), 147

Chickpea rhizobia, intrinsic antibiotic resistance in (Garg *et al.*), 85

Chilling injury in field-grown ratoon cotton, characterization of climatic factors affecting (Sachs and Zilkah), 475

Chlormequat on radiation attenuation by winter barley canopies, influence of foliar applied (Green *et al.*), 213

Cicer arietinum, *see* Chickpea

Climatic potential for field hay drying in north-west Europe (Thompson *et al.*), 167

Clover in a field sward, some effects of canopy height on perennial ryegrass and white (Wilman and Shrestha), 79

Coating and modified atmosphere effects on potato tuber greening (Banks), 59

Cobalt additions on soil and herbage cobalt concentrations in some S.E. Scotland pastures, effects of (McLaren *et al.*), 347

Copper content of soil and herbage following pig slurry application to grassland (Parkinson and Yells), 183
Cotton, characterization of climatic factors affecting chilling injury in field-grown ratoon (Sachs and Zilkah), 475
leafworm by mineral oils, enhancement of the efficiency of some insecticides against thrips and (Moustafa and El Attal), 63
Cow pea, interactions between fungicides, insecticides and spraying regimes in the control of fungal diseases, insect pests and yield of (Oladiran and Oso), 45
to CO_2 enrichment environment on growth, dry-matter production and yield components at different stages of vegetative and reproductive growth, response of (Bhattacharya *et al.*), 527
Cucumber mosaic virus, reaction of lettuce cultivars to (Walkey *et al.*), 291
Cultural practices on mustard under semi-arid rainfed conditions of north-west India, effect of preceding season (Giri and Saran), 91

Death rate of ciliate protozoa in the rumen, possible causes of the high (Coleman), 39
Density and a statistical comparison with other models, empirical model relating crop yield to weed and crop (Cousens), 513
on variation in plant size of red beet crops, influence of seed type and plant (Benjamin and Bell), 563
Digestibility by sheep and goats of five roughages offered alone or with concentrates (Antoniou and Hadjipanayiotou), 663
predictive model of seasonal changes in herbage (Illius), 505
Dipel against the spiny bollworm, evaluation of the potency of the biological compound (Mesbah), 587
Draught force, work output and power of oxen, factors affecting the measurements of (Lawrence and Pearson), 703
Drill, effects of seed covering treatments on the emergence and seedling growth of crisp lettuce drilled with an experimental dibber (Wurr *et al.*), 535
Dry-matter production in grass varieties from different latitudes in northern Europe, seasonal distribution of (Hay), 187
Drying rate of forage: effects of desiccants and crop density, evaporation-based (Pitt), 223

Ear emergence and height on yield of winter wheat, effects of differences in date of (Innes *et al.*), 543
Earias insulana, *see* Bollworm, spiny
Emergence and seedling growth of crips lettuce drilled with an experimental dibber drill, effects of seed covering treatments on the (Wurr *et al.*) 535
Ergot on the growth of obese and lean mice, effect of alkaloid-free (Mantle and Willingale), 407
Evaporation-based drying rate of forage: effects of desiccants and crop density (Pitt), 223
Ewes, *see* Sheep

Faecal loss of phosphorus in growing lambs and the calculation of phosphorus requirements, endogenous (Braithwaite), 67
Fallow as a store for fertilizer nitrogen in a semi-arid region, efficiency of (Seligman *et al.*), 245
Fertilizer application on glasshouse-grown plants of dihaploid potatoes, effects of changes in (De, Maine), 251
nitrogen, *see* Nitrogen
Floral initiation in pearl millet, water stress and time of (Mahalakshmi and Bidinger), 437
Fluoride to drinking water given to pregnant ewes and their lambs upon physiology and wool growth, effects of added (Wheeler *et al.*), 715
Forage, evaporation-based drying rate of (Pitt), 223
Fungicide(s) for the control of mildew on spring barley, comparison of (Wale and Hunter), 573
insecticides and spraying regimes in the control of fungal diseases, insect pests and yield of cow pea (Oladiran and Oso), 45
tests of amounts and times of application of sequential sprays of, on winter wheat, following either beans or wheat, and the effects of take-all on two varieties at Saxmundham, Suffolk 1980–3 (Widdowson *et al.*), 97

Grass(es) cell walls by rumen micro-organisms, *in vivo* colonization of (Elliott *et al.*), 279
for silage in Northern Ireland, evaluation of the sulphur status of some (Stevens), 581
influence of age and year of growth on the botanical composition and productivity of swards (Smith and Allcock), 299
production, effects of management and duration of grazing by sheep during the autumn and winter on subsequent (Newton and Jackson), 199
to a wide range of nitrogen application rates, comparison of the yield responses of four (Reid), 381
varieties from different latitudes in northern Europe, seasonal distribution of dry-matter production in (Hay), 187
see also Ryegrass
Grassland, copper content of soil and herbage following pig slurry application to (Parkinson and Yells), 183
Grazing by sheep during the autumn and winter on subsequent grass production, effects of management and duration of (Newton and Jackson), 199
Growth regulators, suppression of lodging in triticale following foliar application of (Green and McDonald), 731
Gaeumannomyces graminis, *see* Take-all
Genes in a barley breeding programme, usefulness and limitations of estimating the number of (Powell *et al.*), 285
Genetic improvement of Syrian Awassi sheep with special reference to milk production (Hossamo *et al.*), 327
Glucosinolate concentration of rapeseed, simple and rapid method of quantitatively measuring the Smith *et al.*), 597
Goats of five roughages offered alone or with concentrates, digestibility by sheep and (Antoniou and Hadjipanayiotou), 663

Hay drying in north-west Europe, climatic potential for field (Thompson *et al.*), 167

Height and seed yield of oil-seed rape, effect of paclobutrazol on plant (Scarisbrick *et al.*), 605
on yield of winter wheat, effects of differences in date of ear emergence and (Innes *et al.*), 543
Herbage cobalt concentrations in some S.E. Scotland pastures, effects of cobalt additions on soil and (McLaren *et al.*), 347
digestibility, predictive model of seasonal changes in (Illius), 505
following pig slurry application to grassland, copper content of soil and (Parkinson and Yells), 183
Honeybees with alarm pheromones, repelling foraging (Free *et al.*), 255
Hormones and rams on the reproductive performance of Finn-cross ewes during the seasonal anoestrus in Israel, effect of (Amir and Gacitua), 375
Hydrogenation by sheep rumen digesta, effects of dietary starch and fibre on the *in vitro* rates of lipolysis and (Gerson *et al.*), 27

Inheritance of resistance to leaf curl virus disease in a cross between tomato and currant tomato (Yassin), 659
Insecticides against thrips and cotton leafworm by mineral oils, enhancement of the efficiency of some (Moustafa and El Attal), 63
fungicides and spraying regimes in the control of fungal diseases, insect pests and yield of cow pea (Oladiran and Oso), 45
Intercropping system under late-sown conditions, water and nitrogen management in wheat–lentil (Ahlawat *et al.*), 697
Iron-efficient genotypes of rice in calcareous soil, evaluation of technique for screening (Singh *et al.*), 193
Isozyme genetic similarity among rye cultivars (Ramirez *et al.*), 495

Kernels in wheat crops and the influence of solar radiation and temperature, number of (Fischer), 447

Lactuca sativa, *see* Lettuce
Lambs, *see* Sheep
Latitudes in northern Europe, seasonal distribution of dry-matter production in grass varieties from different (Hay), 187
Leafworm, cotton, *see* Cotton
Legume(s), fodder, affecting sequential crop production and fertilizer N use efficiency (De *et al.*), 1
to the fertilizer nitrogen economy in a maize-based cropping system, contribution of (Singh *et al.*), 491
yield and nitrogen fixation, effect of soil nitrogen on grain (Jessop and Mahoney), 231
Lentil–wheat intercropping system under late-sown conditions, water and nitrogen management in (Ahlawat *et al.*), 697
Lettuce crops on head weight at maturity, effect of amount and timing of nitrogen application to drilled crisp (Wurr and Fellows), 727
cultivars to cucumber mosaic virus, reaction of (Walkey *et al.*), 291
drilled with an experimental dibber drill, effects of seed covering treatments on the emergence and seedling growth of crisp (Wurr *et al.*), 535
heavy metal uptake from contaminated soils by six varieties of (Crews and Davies), 591
Light, hormones, and rams on the reproductive performance of Finn-cross ewes during the seasonal anoestrus in Israel, effect of (Amir and Gacitua), 375
Lipolysis and hydrogenation by sheep rumen digesta, effects of dietary starch and fibre on the *in vitro* rates of (Gerson *et al.*), 27
Lodging in triticale following foliar application of growth regulators, suppression of (Green and McDonald), 731
Lycopersicon esculentum, *see* Tomato
Lycopersicon pimpinellifolium, *see* Tomato

Maize-based cropping system, contribution of legumes to the fertilizer nitrogen economy in a (Singh *et al.*), 491
to soil-applied zinc in tropical rainforest and savannah regions, responses of yield, components of yield and nutrient content of (Kayode), 135
Metal uptake from contaminated soils by six varieties of lettuce, heavy (Crews and Davies), 591
Mice, effect of alkaloid-free ergot on the growth of obese and lean (Mantle and Willingale), 407
Micro-organisms, *in vivo* colonization of grass cell walls by rumen (Elliott *et al.*), 279
Mildew on spring barley, comparison of fungicides for the control of (Wale and Hunter), 573
Milk production, genetic improvement of Syrian Awassi sheep with special reference to (Hossamo *et al.*), 327
Millet(s), growth, mineral composition and grain yield of irrigated and rainfed (Muldoon), 31
pearl, water stress and time of floral initiation in (Mahalakshmi and Bidinger), 437
Model of seasonal changes in herbage digestibility, predictive (Illius), 505
relating crop yield to weed and crop density and a statistical comparison with other models, empirical (Cousens), 513
Muscles in Double Muscled and normal cattle, growth and distribution of individual (Shahin and Berg), 479
Mustard under semi-arid rainfall conditions of north-west India, effect of preceding season cultural practices on (Giri and Saran), 91
Mycorrhizae of winter and spring cereals, vesicular–arbuscular (Buwalda *et al.*), 649
Mycorrhizal infection in first, second and third cereal crops, effects of vesicular–arbuscular (Buwalda *et al.*), 631

Neocallimastix frontalis and *Piromonas communis*, free- and protein-amino acids of the rumen phycomycete fungi (Kemp *et al.*), 523
Nitrogen application rates, comparison of the yield reponses of four grasses to wide range of (Reid), 381
application to drilled crisp lettuce crops on head weight at maturity, effect of amount and timing of (Wurr and Fellows), 727
concentrations in field-grown spring barley: an examination of the usefulness of expressing concen-

trations on the basis of tissue water (Leigh and Johnston), 397
economy in a maize-based cropping system, contribution of legumes to the fertilizer (Singh *et al.*), 491
fixation by antibiotic-resistant mutants of *Azospirillum brasilense* and their interaction with cheena genotypes in calcareous soil (Rai), 261
in a semi-arid region, efficiency of fallow as a store for fertilizer (Seligman *et al.*), 245
in ryegrass, effect of sulphur deficiency on the uptake and incorporation of (Millard *et al.*), 501
management in wheat–lentil intercropping system under late-sown conditions, water and (Ahlawat *et al.*), 697
metabolism in Zebu cattle, effects of restricted water on, feed intake, nutrient utilization and (Ikhatua *et al.*), 463
on grain legume yield and nitrogen fixation, effect of soil (Jessop and Mahoney), 231
tests on amounts and times of application of, on winter wheat, following either beans or wheat, and the effects of take-all on two varieties at Saxmundham, Suffolk 1980–3 (Widdowson *et al.*), 97
use efficiency, fodder legumes affecting sequential crop production and (De *et al.*), 1
Nitrogenous fertilizer to wheat grown continuously compared with wheat in a four-course rotation, some effects of rate of application of (Ridgman *et al.*), 389
Nutritional check in early post-natal life on the subsequent growth of sheep to the age of 12–14 months, effects of a severe (Hopkins and Tulloh), 551

Oestrous activity in Finn ewes and two Egyptian fat-tailed sheep under subtropical conditions, comparative study of (Aboul-Naga *et al.*), 469
in sows, attempts to develop a simple, objective test for (Henderson *et al.*), 129
Oxen, factors affecting the measurements of draught force, work output and power of (Lawrence and Pearson), 703

Paclobutrazol on plant height and seed yield of oilseed rape, effect of (Scarisbrick *et al.*), 605
on the distribution and utilization of ^{14}C-labelled assimilate fixed at anthesis in oil-seed rape, influence of (Addo-Quaye *et al.*), 365
Panicum miliaceum, *see* Cheena
Pastures, effects of cobalt additions on soil and herbage cobalt concentrations in some S.E. Scotland (McLaren *et al.*), 347
Pheromones, repelling foraging honeybees with alarm (Free *et al.*), 255
Phosphorus by growing lambs, effect of dietary intake of calcium and dry matter on the absorption and excretion of calcium and (Field *et al.*), 237
depletion in sheep: effects on plasma inorganic phosphorus, calcium, 1,25-$(OH)_2$-Vit.D_3 and alkaline phosphatase and on gastrointestinal P and Ca balances (Breves *et al.*), 623
in growing lambs and the calculation of phosphorus requirements, endogenous faecal loss of (Braithwaite), 67
intake on salivary phosphorus secretion, net intestinal phosphorus absorption and faecal endogenous excretion in sheep, effect of variation in (Scott *et al.*), 271
Phycomycete fungi *Neocallimastix frontalis* and *Piromonas communis*, free- and protein-amino acids of the rumen (Kemp *et al.*), 523
Pigs, attempts to develop a simple, objective test for oestrus in sows (Henderson *et al.*), 129
Piromonas communis, free- and protein-amino acids of the rumen phycomycete fungi *Neocallimastix frontalis* and (Kemp *et al.*), 523
Potassium in the profiles of two long-term experiments in relation to K nutrition of crops, forms of (Ganeshamurthy *et al.*), 209
Potato(es) drop tests and other binary response experiments, sequential design for estimating levels with low response rates in (Kershaw and McRae), 51
effects of changes in fertilizer application on glasshouse-grown plants of dihaploid (De, Maine), 251
effects of crop husbandry and growing conditions on storage losses of Pentland Crown (Wilcockson *et al.*), 413
production, optimizing seed rate and stem density for seed (Sekhon and Singh), 189
stemflow in (Jefferies and MacKerron), 205
tuber greening, coating and modified atmosphere effects on (Banks), 59
Protozoa in the rumen, possible causes of the high death rate of ciliate (Coleman), 39

Rabbits, allometric changes during growth in (Deltoro and Lopez), 339
Radiation and temperature, number of kernels in wheat crops and the influence of solar (Fischer), 447
attenuation by winter barley canopies, influence of foliar applied chlormequat on (Green *et al.*), 213
Rape, oil-seed, effect of paclobutrazol on plant height and seed yield of (Scarisbrick *et al.*), 605
oil-seed, influence of paclobutrazol on the distribution and utilization of ^{14}C-labelled assimilate fixed at anthesis in (Addo-Quaye *et al.*), 365
Rapeseed, simple and rapid method of quantitatively measuring the glucosinolate concentration of (Smith *et al.*), 597
Ratoon cotton, characterization of climatic factors affecting chilling injury in field-grown (Sachs and Zilkah), 475
Reproduction in prolific ewes, studies on (Robinson *et al.*), 21
Reproductive performance of Finn-cross ewes during the seasonal anoestrus in Israel, effect of artificial light, hormones, and rams on the (Amir and Gacitua), 375
Resistance to leaf curl virus disease in a cross between tomato and currant tomato, inheritance of (Yassin), 659
Rhizobia, intrinsic antibiotic resistance in chickpea (Garg *et al.*), 85
Rice in calcareous soil, evaluation of technique for screening Fe-efficient genotypes of (Singh *et al.*), 193
Root growth and water use of sugar beet, fibrous (Brown and Biscoe), 679

Roughages offered alone or with concentrates, digestibility by sheep and goats of five (Antoniou and Hadjipanayiotou), 663
Rumen digesta, effects of dietary starch and fibre on the *in vitro* rates of lipolysis and hydrogenation by sheep (Gerson *et al.*), 27
micro-organisms, *in vivo* colonization of grass cell walls by (Elliott *et al.*), 279
of cattle and sheep, relative resistance to escape of leaf and stem particles from the (Poppi *et al.*), 9
phycomycete fungi *Neocallimastix frontalis* and *Piromonas communis*, free- and protein-amino acids of the (Kemp *et al.*), 523
possible causes of the high death rate of ciliate protozoa in the (Coleman), 39
Rye cultivars, isozyme genetic similarity among (Ramirez *et al.*), 495
Ryegrass and white clover in a field sward, some effects of canopy height on perennial (Wilman and Shrestha), 79
effect of sulphur deficiency on the uptake and incorporation of nitrogen in (Millard *et al.*), 501

Screening Fe-efficient genotypes of rice in calcareous soil, evaluation of technique for (Singh *et al.*), 193
Secale cereale, *see* Rye
Seed covering treatments on the emergence and seedling growth of crisp lettuce drilled with an experimental dibber drill, effects of (Wurr *et al.*), 535
rate and stem density for seed potato production, optimizing (Sekhon and Singh), 189
type and plant density on variation in plant size of red beet crops, influence of (Benjamin and Bell), 563
yield of oil-seed rape, effect of paclobutrazol on plant height and (Scarisbrick *et al.*), 605
Sequential design for estimating levels with low response rates in potato drop tests and other binary response experiments (Kershaw and McRae), 51
Sheep and goats of five roughages offered alone or with concentrates, digestibility by (Antoniou and Hadjipanayiotou), 663
dietary phosphorus depletion in (Breves *et al.*), 623
during the autumn and winter on subsequent grass production, effects of management and duration of grazing by (Newton and Jackson), 199
effect of artificial light, hormones, and rams on the reproductive performance of Finn-cross ewes during the seasonal anoestrus in Israel (Amir and Gacitua), 375
effect of dietary intake of calcium and dry matter on the absorption and excretion of calcium and phosphorus by growing lambs (Field *et al.*), 237
effect of variation in phosphorus intake on salivary phosphorus secretion, net intestinal phosphorus absorption and faecal endogenous excretion in (Scott *et al.*), 271
effects of added 30 mg fluoride/l drinking water given to pregnant ewes and their lambs upon physiology and wool growth (Wheeler *et al.*), 715
endogenous faecal loss of phosphorus in growing lambs and the calculation of phosphorus requirements (Braithwaite), 67
relative resistance to escape of leaf and stem particles from the rumen of cattle and (Poppi *et al.*), 9
rumen digesta, effects of dietary starch and fibre on the *in vitro* rates of lipolysis and hydrogenation by (Gerson *et al.*), 27
studies on reproduction in prolific ewes (Robinson *et al.*), 21
to the age of 12–14 months, effects of a severe nutritional check in early post-natal life on the subsequent growth of (Hopkins and Tulloh), 551
under subtropical conditions, comparative study of oestrous activity in Finn ewes and two Egyptian fat-tailed (Aboul-Naga *et al.*), 469
with special reference to milk production, genetic improvement of Syrian Awassi (Hossamo *et al.*), 327
wool growth of pregnant and lactating Merino ewes (Oddy), 613
Silage in Northern Ireland, evaluation of the sulphur status of some grasses for (Stevens), 581
Slurry application to grassland, copper content of soil and herbage following pig (Parkinson and Yells), 183
Soil and herbage cobalt concentrations in some S.E. Scotland pastures, effects of cobalt additions on (McLaren *et al.*), 347
and herbage following pig slurry application to grassland, copper content of (Parkinson and Yells), 183
by six varieties of lettuce, heavy metal uptake from contaminated (Crews and Davies), 591
forms of potassium in the profiles of two long-term experiments in relation to K nutrition of crops (Ganeshamurthy *et al.*), 209
Sorghum, growth, mineral composition and grain yield of irrigated and rainfed (Muldoon), 31
Sowing and the development of winter wheat, time of (Green *et al.*), 217
Sows, *see* Pigs
Stem density for seed potato production, optimizing seed rate and (Sekhon and Singh), 189
Stemflow in potato crops (Jefferies and MacKerron), 205
Stomatal sensitivity in relation to stomatal frequency, diffusive resistances and transpiration rate, at different canopy positions in sunflower genotypes (Prasad *et al.*), 673
Storage losses of Pentland Crown potatoes, effects of crop husbandry and growing conditions on (Wilcockson *et al.*), 413
Sulphur deficiency on the uptake and incorporation of nitrogen in ryegrass, effect of (Millard *et al.*), 501
status of some grasses for silage in Northern Ireland, evaluation of the (Stevens), 581
Sunflower genotypes, regulation of water loss under moisture stress in (Prasad *et al.*), 673
Swards, influence of age and year of growth on the botanical composition and productivity of (Smith and Allcock), 299

Take-all, tests of amounts and times of application of nitrogen and of sequential sprays of aphicide and fungicides on winter wheat, following either beans

or wheat, and the effects of, on two varieties at Saxmundham, Suffolk 1980–3 (Widdowson *et al.*), 97
Temperature, number of kernels in wheat crops and the influence of solar radiation and (Fischer), 447
Thrips and cotton leafworm by mineral oils, enhancement of the efficiency of some insecticides against (Moustafa and El Attal), 63
Time of sowing and the development of winter wheat (Green *et al.*), 217
Tomato and currant tomato, inheritance of resistance to leaf curl virus disease in a cross between . (Yassin), 659
Triple test cross in wheat, estimation of additive and dominance components through (Singh *et al.*), 123
Triticale following foliar application of growth regulators, suppression of lodging in (Green and McDonald), 731
Trypanosomiasis risk, Boran cattle maintained by chemoprophylaxis under (Trail *et al.*), 147

Urea and urea supergranules for irrigated wheat, relative efficiency of (Prasad and Singh), 693

Vesicular–arbuscular mycorrhizae of winter and spring cereals (Buwalda *et al.*), 649
mycorrhizal infection in first, second and third cereal crops, effects of (Buwalda *et al.*), 631
Vigna unguiculata, *see* Cow pea
Virus disease in a cross between tomato and currant tomato, inheritance of resistance to leaf curl (Yassin), 659
infection: a host dependent reaction reversible phenomenon (Ghosh), 141
reaction of lettuce cultivars to cucumber mosaic (Walkey *et al.*), 291
Vitamin E in stored barley, effects of moisture, propionic acid, sodium hydroxide and anaerobiasis on the stability of (Rice *et al.*), 15

Water and nitrogen management in wheat–lentil intercropping system under late-sown conditions (Ahlawat *et al.*), 697
loss under moisture stress in sunflower genotypes (Prasad *et al.*), 673
on feed intake, nutrient utilization and nitrogen metabolism in Zebu cattle, effects of restricted (Ikhatua *et al.*), 463
stress and time of floral initiation in pearl millet (Mahalakshmi and Bidinger), 437
use of sugar beet, fibrous root growth and (Brown and Biscoe), 679
Weed and crop density and a statistical comparison with other models, empirical model relating crop yield to (Cousens), 513
Wheat crops and the influence of solar radiation and temperature, number of kernels in (Fischer), 447
grown continuously compared with wheat in a four-course rotation, some effects of rate of application of nitrogenous fertilizer to (Ridgman *et al.*), 389
estimation of additive and dominance components through triple test cross in (Singh *et al.*), 123
–lentil intercropping system under late-sown conditions, water and nitrogen management in (Ahlawat *et al.*), 697
relative efficiency of urea and urea supergranules for irrigated (Prasad and Singh), 693
winter, effects of differences in date of ear emergence and height on yield of (Innes *et al.*), 543
winter, tests of amounts and times of application of nitrogen and of sequential sprays of aphicide and fungicides on, following either beans or wheat, and the effects of take-all on two varieties at Saxmundham, Suffolk 1980–3 (Widdowson *et al.*), 97
winter, time of sowing and the development of (Green *et al.*), 217
Wool growth, effects of added 30 mg fluoride/l drinking water given to pregnant ewes and their lambs upon physiology and (Wheeler *et al.*), 715
growth of pregnant and lactating Merino ewes (Oddy), 613
Work output and power of oxen, factors affecting the measurements of draught force (Lawrence and Pearson), 703

Yield to weed and crop density and a statistical comparison with other models, empirical model relating crop (Cousens), 513

Zebu cattle, *see* Cattle
Zinc in tropical rainforest and savannah regions, responses of yield, components of yield and nutrient content of maize to soil-applied (Kayode), 135